Boldon School

INNOVATE: FOCUS: ACHIEVE

ICT & Computing Year 7

Year 7	Acquiring	Developing	Securing	Mastering
E-Safety & Digital Security	You are able to produce a relevant E-Safety. You are able to produce a relevant E-Safety document to identify some dangers. Able to locate and identify saved work within the school network. Able to explain what is meant by E-Safety. You are able to create a digital document that identify and explains the dangers of ICT. You are able to create a digital document that identify and explains the dangers of ICT.	You are able to identify and explain the different problems that might arise within E-Safety and cyber bullying. You are able to produce a PowerPoint that shows your understanding of the software and E-Safety. Assess your use of ICT and critically reflect to make improvements.	Explain, identify and show understanding of the need for E-Safety with the use of technology in the 21st century. Critically evaluate your own work to improve the level you are working at using the success criteria.	Evaluate problems arising with the use of technology to provide an accurate solution. Able to develop a complete document which will actively make others aware of the need for E-Safety and how to prevent potential future problems. Develop scenarios that accurately reflect e-safety risks to increase awareness to the audience whilst making them aware of how to protect themselves online. Reflect on work identifying areas of weakness and improvements.
Graphics & Presentation	Able to identify different forms of producing information. Understand the need for a document to be suitable to its purpose. Able to plan and develop an informative digital document. Identify the audience's needs to make a suitable design.	Able to plan and develop a digital document making use of formatting tools. Explain how the document is suitable for the particular audience. Able to plan and develop an informative document making appropriate use of formatting and design tools. Identify and explain the different features within the digital document that is suited towards the appropriate audience.	Develop an informative document that uses formatting and design elements to emphasise important content within your document. Evaluate the target audience to produce an effective informative document.	Independently develop an informative document that will use an effective design and content in order to meets its purpose. Evaluate the specific target audience and explain how you will be able to produce a document that will meet their needs.

Year 7	Acquiring	Developing	Securing	Mastering
Microbit Programming	Demonstrate an understanding of Scripts. Demonstrate the use of a sequence that shows control systems within your coding. Demonstrate the use of a sequence that involves the use of the LED's and animation. Understand the importance of being able to program a range of devices. Understand the features that are included within a Microbit Device.	Develop a program that involves a loop and control. Show a good understanding of the script you have developed by adding comments to your code for defensive design and debugging your program. Explain how programming can be achieved through different languages. Explain a range of features that are included in a Microbit device.	Develop a program on the Micro Bit that demonstrated the use of loops, sensing and control. Show a critical understanding of your coding by reviewing the script and explaining how you make your program more efficient. Assess how each feature could be used within a program on your Microbit device.	Develop a program or sequence that demonstrate the successful use of selection, sensing and operators. Evaluate and show critical understanding of your code by debugging your programmes independently to show how they could be made more efficient. Evaluate the need for each feature on the Microbit device and have a clear understanding of their role within a larger and more complex computer system.
Computer Control	Create a set of instructions that mostly work well to control a basic situation. Identify some problems and use software to control the situation. Understand what is meant by algorithms and identify the shapes used to represent each stage. Identify control systems that are commonly used.	Identify all problems and use suitable software to control the situation. Create a set of instructions that work well to control a basic situation. Explain how each shape is used within an algorithm to represent different stages of the flowchart. Explain how control systems can be used to achieve tasks more efficiently.	Create a detailed set of instructions that work well to control a more complex situation. Assess problems and use suitable software to control the situation, using loops and sensors where appropriate. Assess how effectively each shape has been used in a flowchart algorithm and how they have been used to represent a control systems purpose.	Create a series of programs that work well to control complex situations. Evaluate problems and use suitable software to control the situation, using loops, sensors and subroutines where appropriate. Evaluate the importance of using algorithms to represent control systems and suggest how they could potentially be made more efficient.

Year 7	Acquiring	Developing	Securing	Mastering
Data Management	Identify the purpose of a Database. Explain how data is input into a database using Microsoft Access.	Demonstrate an understanding of data types. Develop a functioning database by creating data types for each field using Microsoft Access.	Develop simple queries in Microsoft Access within a database to pull data. Develop queries to run appropriate data reports using Microsoft Access.	Develop a database that includes validation and verification to improve data security. Evaluate by showing critical understanding of databases by creating an effective, integrated IT system where users should be able to search a database.

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ICT & Computing Year 8

Year 8	Acquiring	Developing	Securing	Mastering
Cyber Security & Digital Safety	You are able to produce a relevant E-Safety document to identify some dangers. Able to locate and identify saved work within the school network. Able to explain what is meant by E-Safety. Identify the need for ICT both in and out of school. You are able to create a digital document that identify and explains the dangers of ICT.	You are able to identify and explain the different problems that might arise within E-Safety and cyber bullying. You are able to produce a PowerPoint that shows your understanding of the software and E-Safety. Assess your use of ICT and critically reflect to make improvements.	Explain, identify and show understanding of the need for E-Safety with the use of technology in the 21st century. Critically evaluate your own work to improve the level you are working at using the success criteria.	Evaluate problems arising with the use of technology to provide an accurate solution. Able to develop a complete document which will actively make others aware of the need for E-Safety and how to prevent potential future problems. Develop scenarios that accurately reflect e-safety risks to increase awareness to the audience whilst making them aware of how to protect themselves online. Reflect on work identifying areas of weakness and improvements.
Computational thinking in Scratch	Demonstrate some understanding of scripts. Develop a sequence that involves some motion. Demonstrate the use of a sequence that is able to control your program. Demonstrate the use of a sequence that involves different forms of motion and animation.	Develop a program that includes some form of a loop (Forever, Repeat). Show understanding of the script by debugging your programmes.	Develop a program that involves loops, control and sensing. Show understanding of the script by debugging the program and adding comments to explain the code. Develop a program that demonstrates the use of sensing, loops control and operators. Show understanding of the script by debugging the program and adding comments to explain the code.	Develop a program that demonstrates the successful use of selection, sensing and operators. Evaluate and show critical understanding of code by debugging and explaining the script of a programme independently.

Year 8	Acquiring	Developing	Securing	Mastering
Video Production	Explain the purpose and features of videos. Produce designs for a video. Produce a limited video that advertises a product.	Describe the audience & purpose for the design. Review how the products are fit for purpose / audience. Produce a detailed video design, including reasons why alternative ideas have been discarded. Produce a working video advert. Gather feedback from others and improve.	Discuss the strengths & weaknesses of 2 video adverts. Prepare assets for the video advert (Sources listed). Prepare assets for the video advert (Audience / Sources). Justify the final design decisions. Create a video advert of at least 30 secs including video.	Explain how the video advert is suitable for the audience and purpose. Produce a complex video advert. Refine assets to create a high-quality video advert. Test the product for functionality and purpose. Evaluate the final video product and the initial design and justify any changes made.
Small Basic Programming	Demonstrate an understanding of programming languages and their differences. Show an understanding of key programming construct such as outputs and recognise the commands needed in the programming language. Show an understanding of the Small Basic IDE.	Explain how you can review errors in your program using the debugging method. Develop a program that demonstrates the use of variable, this includes set variables and input data from a user. Explain what is meant by operators and demonstrate accurate use of these in your programming.	Analyse and develop your code further by accurately debugging a range of errors using the IDE features. Explain what is meant by selection and develop a program that makes use of this construct. Assess the importance of being able to code a program that uses selection. Argue the importance of using conditions in selection-based programming.	Evaluate the effectiveness of the code you have developed suggesting how it could be made more efficient. Develop a program that makes use of iteration and evaluate the importance of using this programming construct in complex programs. Design a range of programs that combine key programming constructs with accuracy which includes sequence, selection and iteration. Discuss the differences between count and condition-controlled iteration.

Year 8	Acquiring	Developing	Securing	Mastering
Website Development	Develop a simple website that shows you have considered the audience it is aimed towards. Show that you have planned the design and overall look of your website. Identify important points that should be considered during the development of a website from a brief.	Develop a website that uses a design that has clearly taken the audience into account. Plan the design of your website assessing the audience and what they need from your website. Show some consideration for the usability of the website. Analyse a brief and outline the information that is of most importance when developing your website.	Develop an interactive website that includes a clear explanation on how you have designed it to meet the audience's needs. Carefully plan the design explaining why you have used particular elements within the website. Explain the term usability and how you have attempted to use it within your website. Analyse and compare other websites to your own to show how you can develop your design. Assess the importance information from a brief and suggest how you might design the product to meet their requirements.	Develop your own website that has a clear and professional design. Evaluate the target audience explaining how you have designed your website in order to meet their needs. Explain the term usability whilst implementing it into your website for the users. Evaluate the product which you have developed against the client to show how effective you have been in meeting their needs and requirements. Ensure that you have included a variety of interactive elements and navigation features that produce a professional quality website.

Year 8	Acquiring	Developing	Securing	Mastering
Computer Architecture	Identify different computer systems, discuss CPU and memory. Show a knowledge of binary numbers / hexadecimal numbers / characters. Develop a basic knowledge of secondary storage. Understand different system software including operating systems and utilities. Demonstrate a knowledge of different networks including LANs and WANs.	Demonstrate an understanding of different computer systems. Demonstrate good knowledge of CPU and memory. Discuss CPU and system performance issues. Show a sound knowledge of binary numbers / hexadecimal numbers / characters. Develop a basic knowledge of secondary storage. Understand different system software including operating systems and utilities. Show a knowledge of open source and proprietary software. Show a good knowledge of different networks including LANs and WANs.	Demonstrate good knowledge and understanding of computer systems / CPU / memory. Discuss in detail CPU and system performance issues. Show a good knowledge of binary numbers / hexadecimal numbers / characters. Develop a good knowledge of secondary storage. Show a good knowledge of different system software including operating systems and utilities. Discuss in detail different network types / topologies and network security threats.	Demonstrate an excellent knowledge and understanding of computer systems / CPU / memory. Discuss / review CPU and system performance issues. Show a very good knowledge of binary numbers / hexadecimal numbers / characters. Develop an excellent knowledge of secondary storage. Show excellent knowledge of different system software including operating systems and utilities. Discuss and review different network types / topologies and network security threats.

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ICT & Computing Year 9

Year 9	Acquiring	Developing	Securing	Mastering
Digital Animation	Explain the purpose and features of animations. Produce designs for an animation. Produce a limited animation.	Describe the audience & purpose for the design. Review how the products are fit for purpose / audience. Produce a detailed animation design, including reasons why alternative ideas have been discarded. Produce a working animation. Gather feedback from others and improve.	Discuss the strengths & weaknesses of 2 animations. Prepare assets for the animation (Sources listed). Prepare assets for the animation (Audience / Sources). Justify the final design decisions. Create an animation of at least 30 secs (Inc Audio).	Explain how the animation is suitable for the audience and purpose. Produce a complex animation. Refine assets to create a high-quality animation. Test the product for functionality and purpose. Evaluate the final animation product and the initial design and justify any changes made.
Systems, Networks & Data Representation	Understand that a computer is made up of a range of components and software. Understand the role of the CPU within the wider computer system. Recognise how binary is used throughout a computer system.	Describe the roles of each component within a computer system. Discuss the purpose of each component within the CPU. Explain why binary is used within a computer system. Explain the difference between memory and storage.	Discuss the purpose of each component and assess the impact of upgrading each part. Calculate accurate binary conversions into denary. Assess the characteristics of range of storage and memory types to decide on suitability in a range of situations.	Design accurate network diagrams to show the hardware and connectivity methods. Evaluate the effectiveness of upgrading computer components. Assess the most effective character sets and discuss the relationship with binary data. Analyse how each CPU component plays a part in processing complex data.

Year 9	Acquiring	Developing	Securing	Mastering
Graphics and Binary	Explain the purpose and features of graphics. Produce designs for a graphic. Produce a limited graphic. Understand that graphics are produced using binary numbers.	Describe the audience & purpose for the design. Review how the products are fit for purpose / audience. Produce detailed graphic designs, including reasons why alternative ideas have been discarded. Produce a working graphic. Gather feedback from others and improve.	Discuss the strengths & weaknesses of 2 graphics. Prepare assets for the graphic (Sources listed). Prepare assets for the graphic (Audience / Sources). Justify the final design decisions. Create a graphic that makes use of curves and rasterization.	Explain how the graphic is suitable for the audience and purpose. Produce a complex graphic. Refine assets to create a high-quality graphic. Test the product for functionality and purpose. Evaluate the final graphic product and the initial design and justify any changes made.
Sound and Binary	Explain the purpose and features of digital audio. Produce designs for an audio product. Produce a limited audio product that includes some correct characteristics.	Describe the audience and purpose for the design. Review how the products are fit for purpose / audience. Produce a detailed plan for an audio product, including reasons why alternative ideas have been discarded. Produce a working audio product. Gather feedback from others and improve.	Discuss the strengths & weaknesses of 2 audio products. Prepare assets for the audio product (Sources listed). Prepare assets for the audio product (Audience / Sources). Justify the final design decisions. Create an audio product of at least 30 secs with a range of assets.	Explain how the audio product is suitable for the audience and purpose. Produce a complex audio product. Refine assets to create a high-quality audio product. Test the product for functionality and purpose. Evaluate the final audio product and the initial design and justify any changes made.

Year 9	Acquiring	Developing	Securing	Mastering
Creative Computing Project	Explain the purpose and features of multimedia products. Produce designs for a range of multimedia products. Produce a limited multimedia product.	Describe the audience and purpose for the design. Review how the products are fit for purpose / audience. Produce a detailed plan for your multimedia product, and develop a range of ideas. Produce a working audio product. Gather feedback from others and improve.	Discuss the strengths & weaknesses of 2 multimedia products. Prepare assets for your multimedia products. Prepare assets for your multimedia products. Justify the final design decisions. Create multimedia products that are fit for purpose.	Explain how the multimedia product is suitable for the audience and purpose. Produce a range of complex multimedia products. Refine assets to create high-quality multimedia products. Test the product for functionality and purpose. Evaluate the final products and the initial design and justify any changes made.
Spreadsheets	Understand what a spreadsheet can be used for. Recognise and label the format of a spreadsheet document. Able to identify where a spreadsheet can be used to manage data more efficiently. Use rows and columns within spreadsheets to hold and store data correctly.	Able to explain why a spreadsheet is needed to model data. Format columns and rows to make the spreadsheet model more efficient. Basic use of formulas within a spreadsheet. Explain and understand how data can be managed more efficiently within a spreadsheet document. Develop a range of charts that can be used to present data effectively.	Spreadsheet design can be reformatted for an effective layout. Use of formulas to complete sums. Describe how data can be managed more efficiently within a spreadsheet document. Spreadsheet designs can be reformatted to the user's needs Formulas are used to make the spreadsheet more efficient. Produce accurate charts that make use of all chart elements to present and display data.	Evaluate how data can be managed more efficiently within a spreadsheet document. Data validation has been used in order to minimise errors within a spreadsheet format. Data within the cells has been formatted correctly. More advanced formulas have been used in order to make the model more user friendly and efficient. You can effectively use conditional formatting to make entering data more visually striking. Evaluate your use of charts to present data across a spreadsheet.